User Manual

eco air
www.eco air.org

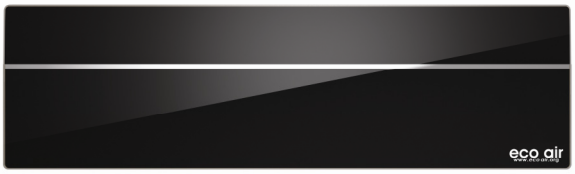
Room Air Conditioners

R410A Split Type – Y Series
DC INVERTER

ECO940SD

ECO120SD

ECO1840SD



- Please read this installation manual completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
- Contact the authorised service technician for repair or maintenance of this unit.

Register your air conditioner

Model information can be found on the CE label.

Please register your product online at www.ecoair.org. For your future convenience, record the model information below.

_____
MODEL NUMBER

_____
SERIAL NUMBER

_____
PURCHASE DATE

Congratulations!

You have purchased the very latest in room air conditioner technology. Your new EcoAir high efficiency room air conditioner will give you many years of dependable service. Many features have been built into your EcoAir air conditioner to assure quiet operation, the best circulation of cool, dry air, functional controls, and the most economical operation.

Table of contents

Disposal	4
Safety Precautions	5
Parts Identification	8
Special Function	9
Manual Operation	10
Adjusting Air Flow Direction	10
Optimal Operation	11
How the Air Conditioner works	12
Operating Tips	12
Cleaning and Maintenance	14
Troubleshooting Tips	16

Inside you will find many helpful hints on how to use and maintain your air conditioner properly. Just a little preventative care on your part can save you a great deal of time and money over the life of your air conditioner. You'll find many answers to common problems in the chart of troubleshooting tips. If you review the chart of Troubleshooting Tips first, you may not need to call for service.

CAUTION

- Contact an authorised service technician for repair or maintenance of this unit. Contact the installer for installation of this unit.
- The air conditioner is not intended for use by young children or invalids without supervision.
- Young children should be supervised to ensure that they do not play with the air conditioner.
- If the power cord is to be replaced, replacement work shall be performed by authorised personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorised personnel only.

IMPORTANT NOTES:

1. Do not operate unit with horizontal louver in closed position.
2. Do not operate unit without the air filter.

Disposal

When using this air conditioner in the European countries, the follow information must be followed:

DISPOSAL: Do not dispose this product as unsorted waste.

It is prohibited to dispose of this appliance in domestic household waste. For disposal:

A) Contact your local council for disposal.

B) The manufacture will take back the old appliance for disposal when you replace with a new product.

C) Old products contain valuable resources, which should be recycled as scrap metal.

Wild disposal of waste in forests and landscapes endangers your health when hazardous substances leak into the ground-water and find their way into the food chain.

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.
Incorrect operation due to ignoring of instructions may cause harm or damage.
The seriousness is classified by the following indications.

WARNING This symbol indicates the possibility of death or serious injury.

CAUTION This symbol indicates the possibility of injury or damage to property.

■ Meanings of symbols used in this manual are as shown below.

Never do this.

Always do this.

WARNING

Plug in power plug properly.
- Otherwise, it may cause electric shock or fire due to excess heat generation.

Do not operate or stop the unit by inserting or pulling out the power plug.
- It may cause electric shock or fire due to heat generation.

Do not damage or use an unspecified power cord.
- It may cause electric shock or fire. If
- the power cord is damaged, it must be replaced by the manufacturer or an authorised service centre or a similarly qualified per-son in order to avoid a hazard.

Do not modify power cord length or share the outlet with other appliances.
- It may cause electric shock or fire due to heat generation.

Do not operate with wet hands or in damp environment.
- It may cause electric shock.

Do not direct airflow at room occupants only.
- This could damage your health.

Always ensure effective earthing.
- No earthing may cause electric shock.

Do not allow water to run into electric parts.
- It may cause failure of machine or electric shock.

Always install circuit breaker and a dedicated power circuit.
- No installation may cause fire and electric shock.

Unplug the unit if strange sounds, smell or smoke comes from it.
- It may cause fire and electric shock.

Do not use the socket if it is loose or damaged.
- It may cause fire and electric shock.

Do not open the unit during operation.
- It may cause electric shock.

Keep firearms away.
- It may cause fire.

Do not use the power cord close to heating appliances.
- It may cause fire and electric shock.

Do not use the power cord near flammable gas or combustibles, such as gasoline, benzene, thinner, etc.
- It may cause an explosion or fire.

Ventilate room before operating air conditioner if there is a gas leakage from another appliance.
- It may cause explosion, fire and, burns.

Do not disassemble or modify unit.
- It may cause failure and electric shock.

⚠ CAUTION

When the air filter is to be removed, do not touch the metal parts of the unit.

- It may cause an injury.

Do not clean the air conditioner with water.

- Water may enter the unit and degrade the insulation. It may cause an electric shock.

Ventilate the room well when used together with a stove, etc.

- An oxygen shortage may occur.

When the unit is to be cleaned, switch off, and turn off the circuit breaker.

- Do not clean unit when power is on as it may cause fire and electric shock, it may cause an injury.

Do not put a pet or house plant where it will be exposed to direct air flow.

- This could injure the pet or plant.

Do not use for special purposes.

- Do not use this air conditioner to preserve precision devices, food, pets, plants, and art objects. It may cause deterioration of quality, etc.

Stop operation and close the window in storm or hurricane.

- Operation with windows opened may cause wetting of indoor and soaking of house-hold furniture.

Hold the plug by the head of the power plug when taking it out.

- Failure to do so may cause electric shock and damage.

Turn off the main power switch when not using the unit for a long time.

- It may cause failure of product or fire.

Do not place obstacles around air-inlets or inside of air-outlet.

- It may cause failure of appliance or accident.

Ensure that the installation bracket of the outdoor appliance is not damaged due to prolonged exposure.

- If bracket is damaged, there is concern of damage due to falling of unit.

Always insert the filters securely. Clean filter once every two weeks.

- Operation without filters may cause failure.

Do not use strong detergent such as wax or thinner. Use a soft cloth for cleaning.

- Appearance may be deteriorated due to change of product colour or scratching of its surface.

Do not place heavy object on the power cord and take care so that the cord is not compressed.

- There is danger of fire or electric shock.

Do not drink water drained from air conditioner.

- It contains contaminants and could make you sick.

Use caution when unpacking and installing. Sharp edges could cause injury.

If water enters the unit, turn the unit off at the power outlet and switch off the circuit breaker. Isolate supply by taking the power-plug out and contact a qualified service technician.

Preparing for operation

1. Contact an installation specialist for installation.
2. Plug in the power plug properly.
3. Do not use a damaged or non-standard power cord.
4. Do not share the same outlet with other appliances.
5. Do not use an extension cord.
6. Do not start/stop operation by plugging/unplugging the power cord.

Usage

1. Exposure to direct airflow for an extended period of time could be hazardous to your health. Do not expose occupants, pets, or plants to direct airflow for extended periods of time.
2. Due to the possibility of oxygen deficiency, ventilate the room when used together with stoves or other heating devices.
3. Do not use this air conditioner for non-specified special purposes (e.g. Preserving precision devices, food, pets, plants, and art objects). Usage in such a manner could harm such property.

Cleaning and maintenance

1. Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling sharp metal edges.
2. Do not use water to clean inside the air conditioner. Exposure to water can destroy the insulation, leading to possible electric shock.
3. When cleaning the unit, first make sure that the power and circuit breaker are turned off.

Operating Temperature

<table>
<tr><th>Temperature | Mode</th><th>Cooling operation</th><th>Heating operation</th><th>Drying operation</th></tr>
<tr><td>Room temperature</td><td>≥17℃</td><td>≤ 30℃</td><td>> 10℃</td></tr>
<tr><td rowspan="2">Outdoor temperature</td><td>0℃ ~ 50℃</td><td rowspan="2">-15℃ ~ 34℃</td><td rowspan="2">0℃ ~ 50℃</td></tr>
<tr><td>(-15℃ ~ 50℃: For the models with low temperature cooling system)</td></tr>
</table>

CAUTION:

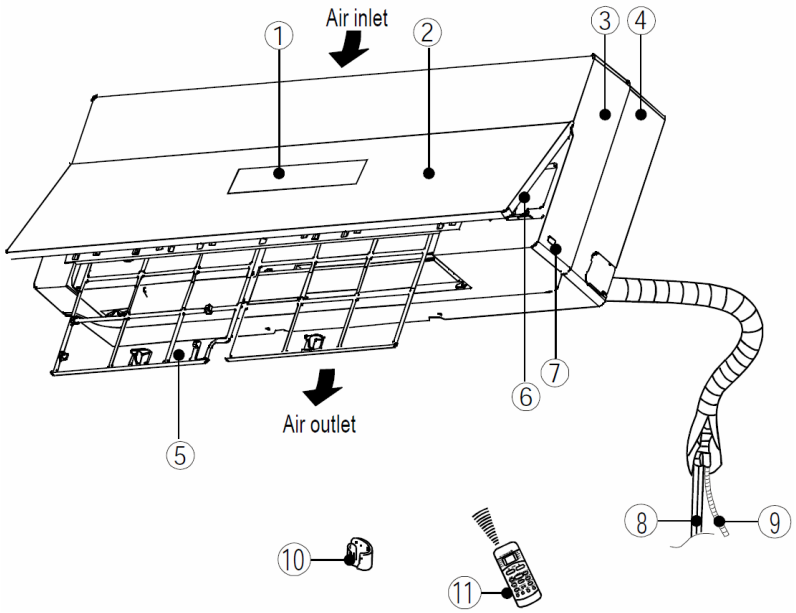
1. If air conditioner is used outside of the above conditions, certain safety protection features may come into operation and cause the unit to function abnormally.
2. Room relative humidity less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please sets the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.
3. Optimum performance will be achieved within this operating temperature.

Parts Identification

Indoor Unit

1. Display window
2. Front panel
3. Panel frame
4. Chassis
5. Air filter
6. Panel brace
7. Manual control button
8. Connecting pipe
9. Drain hose
10. Remote controller holder
11. Remote controller

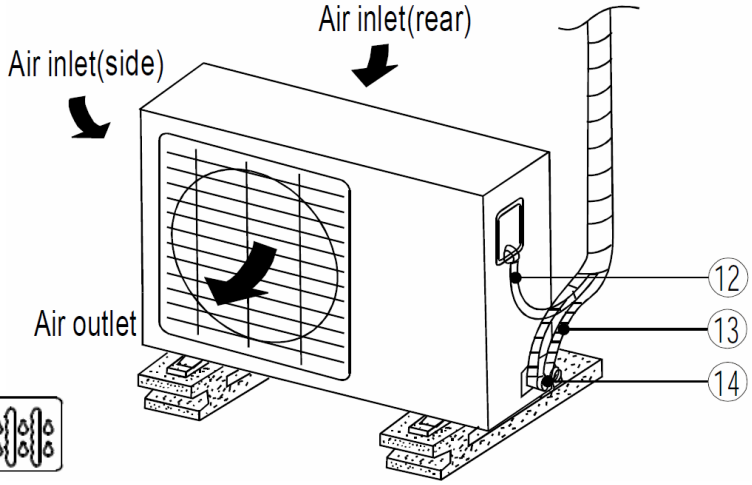
Indoor unit



Outdoor Unit

12. Connecting cable
13. Connective pipe
14. Stop valve

Outdoor unit

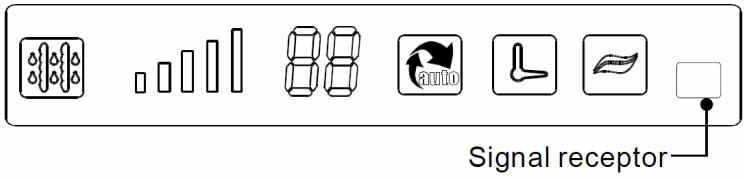


DISPLAY WINDOW

DEFROST operation display
Displayed when the air conditioner starts defrosting automatically or when the warm air control feature is activated in heating operation.

Operation Frequency display
This display is separated into five zones. The zones illuminate based on the compressor current frequency. For example, higher frequency will illuminate more zones.

Display window



Special Function

CLEAN AIR function (on some models)

Improving the quality of indoor air is one of the mission of an air conditioner. This air conditioner is equipped with ionizer or Plasma Dust Collector (Depending on specific configuration of the model). With the anions generated by Ionizer, the air circulation of the air conditioner fills the room with refreshing, natural and healthy air. The Plasma Dust Collector generates an high voltage ionization zone, through which the air is converted to plasma. Inside the air most of the dust, smoke, and pollen particles are captured by the electrostatic filter.

SELF CLEAN function

- Function used after the Shut Down of cooling operation to clean the Evaporator and keep it as fresh for the next operation.
- The unit will operate as following sequence:
  FAN ONLY mode at Low fan speed--Heating operation with LOW fan speed(applicable to cooling & heating models only) ---FAN ONLY operation--Stop Operation---Turn off.
  Note:
- This function is only available under COOL (AUTO COOL, FORCED COOL) and DRY mode.
- Before select the function, it is recommended to run the air conditioner under Cooling operation for about half an hour. Once the Self Clean function is activated, all TIMER settings will be cancelled.
- During Self Cleaning operation, when press the SELF CLEAN button on the remote controller again will stop the operation and turn off the unit automatically.

Follow Me function

The remote control serves as a remote thermostat allowing for the precise temperature control at its location.

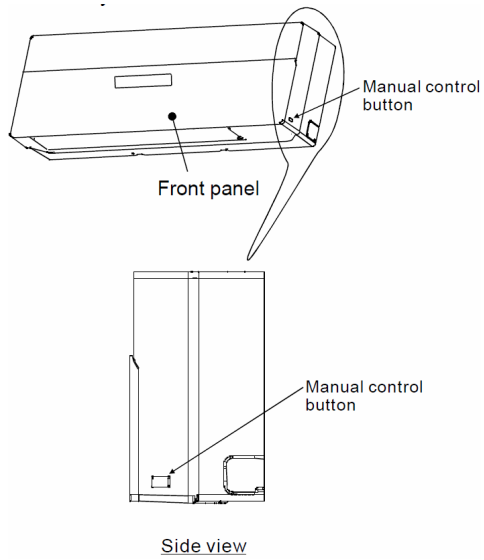
To activate the Follow Me feature, point the remote control towards the unit and press the Follow Me button. The remote display is actual temperature at its location. The remote control will send this signal to the air conditioner every 3 minutes interval until press the Follow Me button again. If the unit does not receive the Follow Me signal during any 7 minute interval, the Follow Me mode will be cancelled automatically.

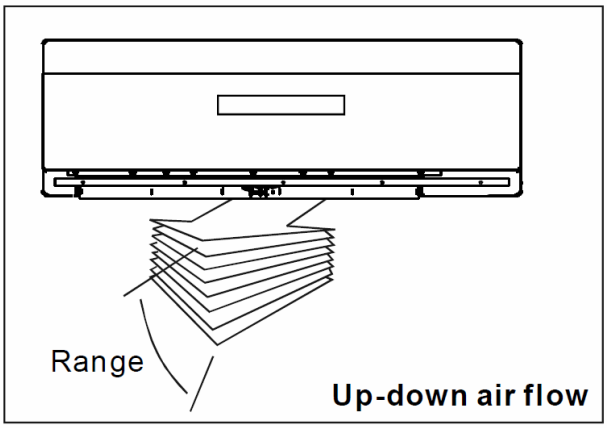
Anti-mildew function (on some models)

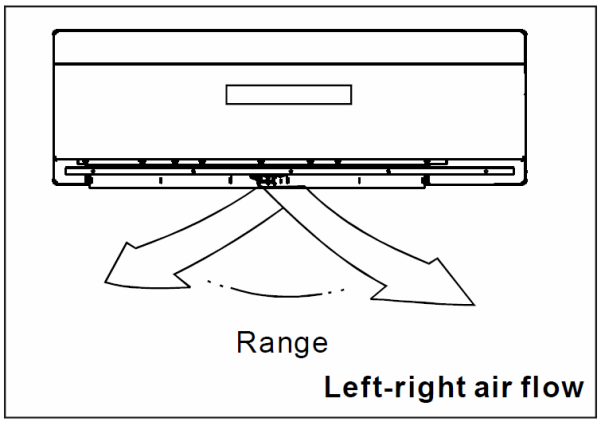
When turns off the unit on COOL, DRY, AUTO (Cool) mode, the air conditioner will continue operating for about 10 minutes(depending on models) at LOW fan speed.

This will help to dry up the condensed water inside the evaporator, and prevent the breeding of mildew.
Under Anti-mildew operation, do not restart the air conditioner until the unit is completely off.

Manual Operation







NOTE: The unit must be turned off before operating the manual control button. If the unit is operational, continue pressing the manual control button until the unit is off.

1 Grasp both sides of the panel and pull it down, the panel opened upward to an angle of 15°. Push the panel upward and then lift it up.

2 One press of the manual control button will lead to the forced AUTO operation. If press the button twice within five seconds, the unit will operate under forced COOL operation.

3 Close the panel firmly to its original position.

CAUTION:

- This button is used for testing purposes only. You had better not choose it.
- To restore the remote controller operation, use the remote controller directly.

ADJUSTING AIR FLOW

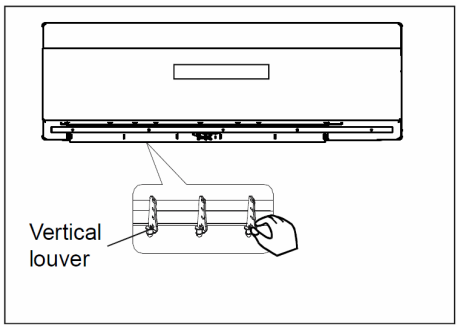
- Adjust the air flow direction properly otherwise, it might cause discomfort or cause uneven room temperatures.
- Adjust the horizontal louver using the remote controller.
- Adjust the vertical louver manually or by the remote controller(depending on the models)

To set the vertical air flow(Up--Down) direction

Perform this function while the unit is in operation. Use the remote controller to adjust the air flow direction. The horizontal louver can be moved at a angle of 6° for each press or set to move up and down automatically. Please refer to the “REMOTE CONTROLLER ILLUSTRATION” for details.

To set the horizontal air flow direction (left - right)

Adjust the vertical louver manually using the lever on the left or right side of the vertical louver arm (Depending on model). Take care not to catch fingers on the fan, horizontal louver or to damage vertical louvers. When the air conditioner is in operation and the horizontal louver is in a specific position, move the lever at left (or right, depending on model) end of the air outlet to the desired position. **NOTE**: For some models, it can be controlled automatically by the remote controller. Please refer to the “REMOTE CONTROLLER ILLUSTRATION” for details.



CAUTION

- The SWING buttons will be disabled when the air conditioner is not in operation.
- Do not operate the air conditioner for long periods with the air flow direction set downward in cooling or dry mode. Otherwise, condensation may occur on the surface of the horizontal louvre causing moisture to drop on to the floor or furnishing.
- Do not move the horizontal louvre manually. Always use the SWING button. If you move this louvre manually, it may malfunction during operation. If the louvre malfunctions, stop the air conditioner once and restart it.
- When the air conditioner is started immediately after it is
- stopped, the horizontal louver might not move for approximately 10 seconds.
- Open angle of the horizontal louvre should not be set too small, as Cooling or Heating performance may be impaired due to too restricted air flow area.
- Do not operate unit with horizontal louvre in closed position.
- When the air conditioner is connected to power (initial power), the horizontal louvre may generate a sound for 10 seconds, this is a normal operation.

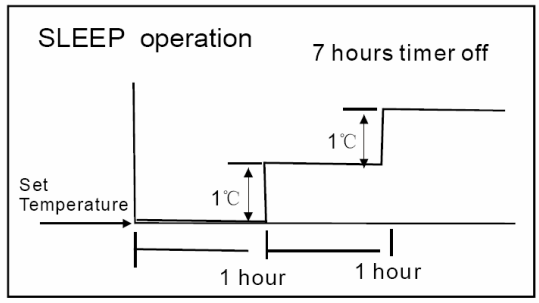
Optimal operation

To achieve optimal performance, please note the following:

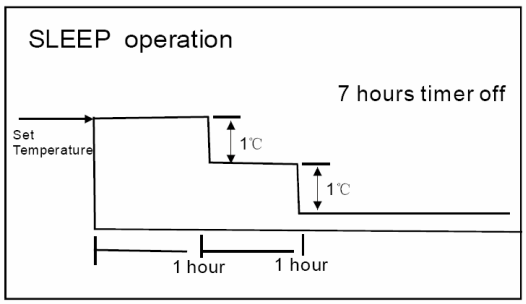
- Adjust the air flow direction correctly so that it is not directed on people.
- Adjust the temperature to achieve the highest comfort level. Do not adjust the unit to excessive temperature levels.
- Close doors and windows on COOL or HEAT modes, otherwise performance may be reduced. Use Timer ON button on the remote control to select a time you want to start your air conditioner.
- Do not put any object near air inlet or air outlet, as the efficiency of the air conditioner may be reduced and the air conditioner may stop running.
- Clean the air filter periodically, otherwise cooling or heating performance may be reduced. Do not operate unit with horizontal louvre in closed position.

Suggestion: For the unit adopts an Electric Heater, when the outside ambient temperature is below 0℃, we strongly recommend you to keep the machine plugged in order to guarantee it running smoothly.

How The Air Conditioner Works



Cooling



Heating

AUTO operation

- When you set the air conditioner in AUTO mode, it will automatically select cooling, heating (cooling/heating models only), or fan only operation depending on what temperature you have selected and the room temperature. The air conditioner will control room temperature automatically round the temperature point set by you.
- If the AUTO mode is uncomfortable, you can select desired conditions manually.

SLEEP operation

When you push SLEEP button on remote controller during cooling, heating(cooling only type without), or AUTO operation , the air conditioner will automatically increase (cooling) or decrease (heating) 1℃ per hour for the first 2 hours, then hold steady for the next 5 hours, after that it will switch off. This characteristic maintains both energy saving and comfort in night operation.

DRYING operation

- The fan speed will be automatically controlled under dry operation.
- During the dry operation, if the room temperature is lower than 10℃, the compressor stops operation and restarts until the room temperature is above 12℃.

Operation Tips

The following events may occur during normal operation.

1. Protection of the air conditioner.

Compressor protection

- The compressor can't restart for 3 minutes after it stops. Anti-cold air (Cooling and heating models only)
- The unit is designed not to blow cold air on HEAT mode, when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.
  A) When heating has just starting.
  B) Defrosting.
  C) Low temperature heating.
- The indoor or outdoor fan stop running when defrosting (Cooling and heating models only). Defrosting (Cooling and heating models only)
- Frost may be generated on the outdoor unit during heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency of the air conditioner.
- During this condition air conditioner will stop heating operation and start defrosting automatically.
- The time to defrost may vary from 4 to 10 minutes according to the outdoor temperature and the amount of frost build-up on the outdoor unit.

2. A white mist coming out from the indoor unit

- A white mist may generate due to a large temperature difference between air inlet and air outlet on COOL mode in an indoor environment that has a high relative humidity.
- A white mist may generate due to moisture generated from defrosting process when the air conditioner restarts in HEAT mode operation after defrosting.

3. Low noise of the air conditioner

- You may hear a low hissing sound when the compressor is running or has just stopped running. This sound is the sound of the refrigerant flowing or coming to a stop.
- You can also hear a low "squeak" sound when the compressor is running or has just stopped running. This is caused by heat expansion and cold contraction of the plastic parts in the unit when the temperature is changing.
- A noise may be heard due to louver restoring to its original position when power is first turned on.

4. **Dust is blown out from the indoor unit.**
   This is a normal condition when the air conditioner has not been used for a long time or during first use of the unit.

5. **A peculiar smell comes out from the indoor unit.**
   This is caused by the indoor unit giving off smells permeated from building material, from furniture, or smoke.

6. **The air conditioner turns to FAN only mode from COOL or HEAT (For cooling and heating models only) mode.**

   When indoor temperature reaches the temperature setting on air conditioner, the compressor will stop automatically, and the air conditioner turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode (For cooling and heating models only) to the set point.

7. **Dripping water may generate on the surface of the indoor unit when cooling in a high relatively humidity (relative humidity higher than 80%)**. Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.

8. **Heating mode (For cooling and heating models only)**
   The air conditioner draws in heat from the outdoor unit and releases it via the indoor unit during heating operation. When the outside temperature falls, heat drawn in by the air conditioner and will decrease accordingly. At the same time, heat loading of the air conditioner increases due to larger difference between indoor and outdoor temperature. If a comfortable temperature can't be achieved by the air conditioner, we suggest you use a supplementary heating device.

9. **Auto-restart function**
   Power failure during operation will stop the unit completely.
   For the unit without Auto-restart feature, when the power restores, the OPERATION indicator on the indoor unit starts flashing. To restart the operation, push the ON/OFF button on the remote controller. For the unit with Auto-restart feature, when the power restores, the unit restarts automatically with all the previous settings preserved by the memory function.

10. Lightning or a car wireless telephone operating nearby may cause the unit to malfunction. Disconnect the unit with power and then re-connect the unit with power again. Push the ON/OFF button on the remote controller to restart operation.

Cleaning and Maintenance

WARNING

It is necessary to stop the air conditioner and disconnect the power supply before cleaning.

Cleaning Indoor Unit & Remote Controller

CAUTION

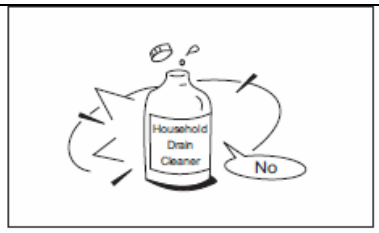
Use a dry cloth to wipe the indoor unit and remote controller.

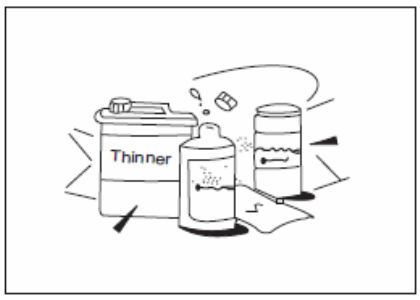
A cloth dampened with cold water may be used on the indoor unit if it is very dirty.

The front panel of the indoor unit can be removed and cleaned with water. Then wipe it with a dry cloth. Do not use a chemically treated cloth or duster to clean the unit.

Do not use benzene, thinner, polishing Powder or similar solvents for cleaning.

These may cause the plastic surface to crack or deform.



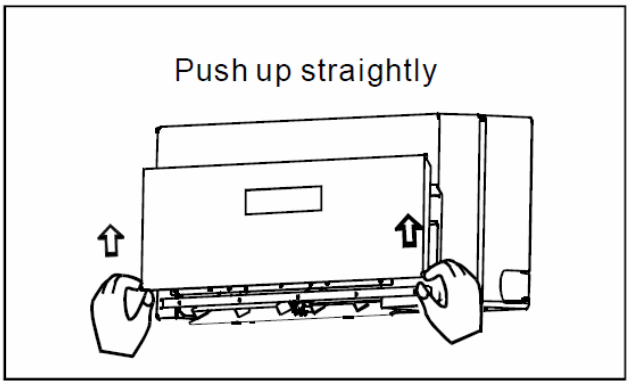


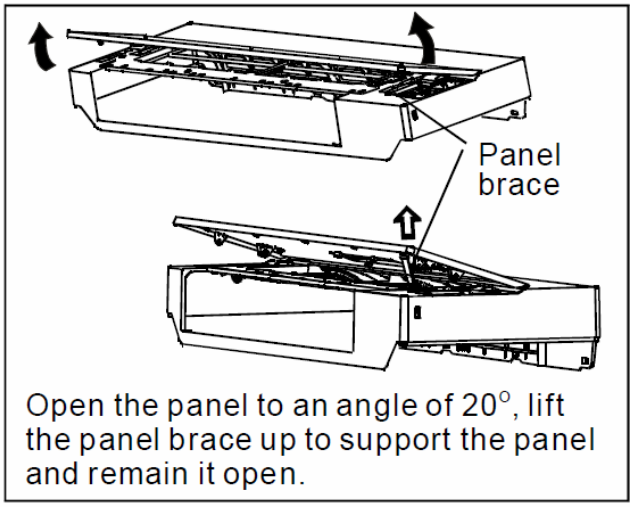
Cleaning the air filter

NOTE: Supply power must be disconnected before cleaning the indoor unit.
A clogged air filter reduces the cooling efficiency
of this unit. Please clean the filter every month or
more often if necessary.

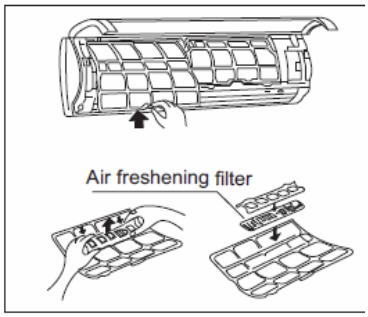
1. Push the front panel up sprightly, then lift it upward to an angle of about 20 , do not force to open it more larger.
2. Use the panel brace to support the front panel and remain it open as shown in the picture.
3. Take hold of the handle of the air filter and lift it up slightly to take it out from the filter holder, and then pull it downwards.
4. Remove the AIR FILTER from the indoor unit.

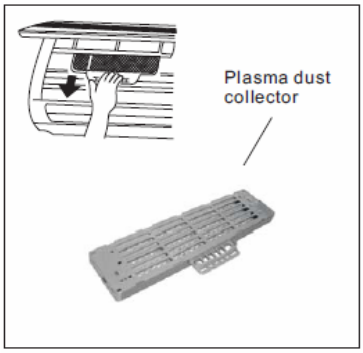
- Clean the AIR FILTER once two weeks.
- Clean the AIR FILTER with a vacuum cleaner or water, and then dry it up in cool place.

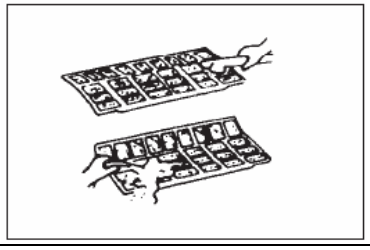




- Remove the air freshening filter from its support frame.
- Clean the air freshening filter at least once a month, and replace it every 4-5 months. Clean it with vacuum cleaner, and then dry it in cool place.
- Remove the Plasma dust collector from its support frame as shown in the Figure on the left (on some models).







⚠ Do not touch the Plasma dust collector within 10 minutes after opening the inlet grill; it may cause an electric shock.

Clean the Plasma dust collector with mild detergent or water and dry in the sunlight for two hours.

Before re-install the Plasma dust collector, check whether the **Y Series** or support frame is damaged or not.

Install the air freshening filter back into position.
Insert the upper portion of air filter back into the unit taking care that the left and right edges line up correctly and place filter into position.

⚠ CAUTION

- Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling sharp metal edges.
- Do not use water to clean inside the air conditioner. Exposure to water can destroy the insulation, leading to possible electric shock.
- When cleaning the unit, first make sure that the power and circuit breaker are turned off

TROUBLE SHOOTING TIPS

Malfunctions and Solutions

Stop the air conditioner immediately if one of the following faults occurs. Disconnect the power and contact the nearest customer service centre.	
Trouble	OPERATION indicator or other indicators flash rapidly (5 times every second) and this flash can't be fixed by disconnecting the power, and then connect it in again.
	Fuse blows frequently or circuit breaker trips frequently.
	Other objects or water penetrate the air conditioner.
	The remote controller won't work or works abnormally.
	Other abnormal situations.

Malfunctions	Cause	What should be done?
Unit does not start	Power cut	Wait for power to be restored.
	Unit may have become unplugged.	Check that plug is securely in wall receptacle.
	Fuse may have blown.	Replace the fuse.
	Battery in Remote controller may have been exhausted.	Replace the battery.
	The time you have set with timer is incorrect.	Wait or cancel timer setting.
Unit not cooling or heating (Cooling/ heating models only) room very well while air flowing out from the air conditioner	Inappropriate temperature setting.	Set temperature correctly. For detailed method please refer to "Using remote control " section.
	Air filter is blocked.	Clean the air filter.
	Doors or Windows are open.	Close the doors or windows.
	Air inlet or outlet of indoor or outdoor unit has been blocked.	Clear obstructions away first, then restart the unit.
	Compressor 3 minutes protection has been activated.	Wait.
If the trouble has not been corrected, please contact a local dealer or the nearest customer service centre. Be sure to inform them of the detailed malfunctions and unit model.		

Notes: Do not attempt to repair the unit yourself.
Always consult an authorised service provider.

ONE (1) YEAR LIMITED WARRANTY
SAVE THIS WARRANTY INFORMATION

EcoAir guarantees this product free from defects in materials and workmanship for a period of one (1) year from the date of purchase, limited to parts only.

Faults arising from a faulty installation is specifically excluded.

This unit must be operated under conditions as recommended, at voltages indicated on the unit. Any attempts made to service or modify the unit by unqualified technician, will render this **WARRANTY VOID**. The actual product may differ slightly from the illustration. This warranty is in addition to, and does not affect, your statutory rights.

For after sales needs, please visit www.ecoair.org/service or email technical@ecoair.org or contact +44 845 474 3574.

We recommend that you note the details of your purchase below and retain your original proof of purchase receipt with this manual. Keep these documents safe in the event of a warranty claim.

Date of purchase: _____

Purchased from (Dealer Name): _____

Retailer name: _____

Model number: _____

Serial number: _____

Date of installation: _____

eco air
www.eco air.org

Copyright Reserved